

# Module 3 - Automation

## Module 2 Topics

We learned:

1. **High-level framework** → simplifies web development
2. **Eloquent ORM** → PHP functions instead of raw SQL
3. **REST APIs** → easy with MVC scaffolding
4. **Security** → middleware makes APIs secure

## Module 2 Issues

Challenges remained:

1. Installation was **difficult and error-prone**
2. Configurations were **hard to manage**
3. **Windows users** depended on WSL2 for automation

## Module 3 as the Solution

Automation fixes these problems:

1. **Docker** → no more manual installation/configuration
2. **Windows users** → use Docker instead of WSL2 Linux
3. **Containers** → Laravel, Nginx, MySQL run independently but work together to deliver a REST API app

# Even More Automation

Beyond servers:

1. **Hugo** → generate professional websites from Markdown
2. **GitHub.io** → publish sites for free
3. **GitHub Actions** → automate build & publish

Everyone has **identical builds** and can publish seamlessly.

## Module 3 Goals

By the end of Module 3, students will:

1. Use **Docker** to build and run Laravel/Nginx/MySQL REST APIs
2. Use **Marp** to build and publish slides/documents
3. Automate publishing to **GitHub.io** with GitHub Actions

# Module 3 Structure

Same as previous modules:

1. **Lecture** → `lecture/` directory
2. **PDF slides** → `pdf/` directory
3. **Code (scripts & sources)** → `code/` directory
4. **Questions** → `questions/` directory

# Preparation for Module 3

**Windows Users** must:

1. Install **Docker** and **Hugo** (HW1)
2. Register on **GitHub** and create a repository (HW1)



# You are ready to finish this course

Complete **Module 3** and **Project 2** to finalize your learning!